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Beatty Spring Complex Enhancement Project

REHABILITATION OF MULTIPLE SPRINGS NEAR BEATTY, NYE COUNTY, NEVADA

File Number: 012715

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NATIONAL SYSTEM OF PUBLIC LANDS

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INTRODUCTION

1.1 INTRODUCTION

The Bureau of Land Management (BLM) in cooperation with Storm-OV, a non-profit organization, propose to conduct a rehabilitation effort on five spring sources near Beatty, Nevada, Southwest Nye County. These springs are located on BLM-managed land within the Battle Mountain District, Tonopah Field Office (TFO). The proposed location for the project would be within T. 11 S., R. 46 E., section 26 and T. 11 S., R. 47 E., sections 7, 8, and 18, Mount Diablo Meridian, Nevada (Figure 1). The proposed action area would consist of rehabilitation of five spring sources (approximately 12 acres), within which all ground-disturbing activities would occur. Vehicle access to the spring locations would be restricted to existing roads; they would not be improved for the purposes of construction or rehabilitation operations.

1.2 AGENCY PURPOSE AND NEED OF THE PROPOSED ACTION

The purpose for this rehabilitation project is to re-establish surface water at spring sites in Oasis Valley important for wildlife. The action is needed in order to meet the following goals and objectives:

- To restore spring systems back to their original function and enhance habitat for the Amargosa toad (*Anaxyrus nelsoni*).
- To establish management controls on non-native predators of the toad including bullfrogs and crayfish.
- To provide areas where important research on Amargosa toad ecology can be conducted to inform future management and conservation policies.
- To provide water for burros, as is required under the Wild Horses & Burros Act, and reduce travel hazards on U.S. Highway 95 due to vehicular collisions with wild horses & burros crossing U.S. Highway 95 to reach water sources.
- To improve viewshed for recreation, bicycle, and hiking.
- To fulfill conservation commitments identified in the *2000 Conservation Agreement and Strategy for the Amargosa Toad and Co-occurring species in the Oasis Valley.*

1.3 RELATIONSHIP TO PLANNING AND CONFORMANCE WITH PLANS

1.3.1 Resource Management Plan

The public lands administered by the BLM TFO are managed in accordance with *Proposed Tonopah Resource Management Plan and Final Environmental Impact Statement* (BLM 1994) and the *Approved Tonopah Resource Management Plan Record of Decision* (BLM 1997), which are in compliance with the Federal Land Policy and Management Act (FLPMA) of 1976, as amended.

While these documents do not specifically provide for this proposed action, they do provide general management direction that includes the proposed action. These are:

- Under the Wildlife Habitat Management section, on Pg. 7, the objective is to "maintain and enhance wildlife habitat and provide for species diversity."

- Under the Special Status Species section, on Pg. 8, the objective is to "protect, restore, enhance, and expand habitat of species identified as threatened, endangered, or Nevada BLM Sensitive Species under the Endangered Species Act."

    - Under the Resource Management Plan (RMP) Determinations #3 for Special Status Species, on Pg. 8, "Habitat for all Federally Listed Threatened or Endangered Species or Nevada BLM Sensitive Species (plant and animal) will be managed or maintained to increase current populations of these species."

- Under the Wild Horse and Burros section, on Pg. 14, the objective is to "manage wild horse and/or burro populations within herd management areas at levels which will preserve and maintain a thriving natural ecological balance consistent with their multiple-use objectives."

    - Under the RMP Determinations 1d for Wild Horses and Burros, on Pg. 14, "Assure sufficient water and forage exists for wild horses and/or burros in herd management areas."

    - Under RMP Determinations 3 for Wild Horse and Burros, Pg. 15 "Apply for appropriative water rights and/or assert public water reserves on water sources necessary to ensure a reliable, year-round water source for wild horses and burros in herd management areas."

1.4 BACKGROUND AND OTHER INFORMATION

Water in the Oasis Valley is crucial to all wildlife that co-exist or are endemic to this geographic location, including the Amargosa toad. The springs proposed for rehabilitation include: Lower Indian Spring, Middle Indian Spring, Burro Seep, Trespass Spring, and Bryan Spring. For a project area map refer to Figure 1. For photos of individual spring sources refer to images 1-10 on the following pages.

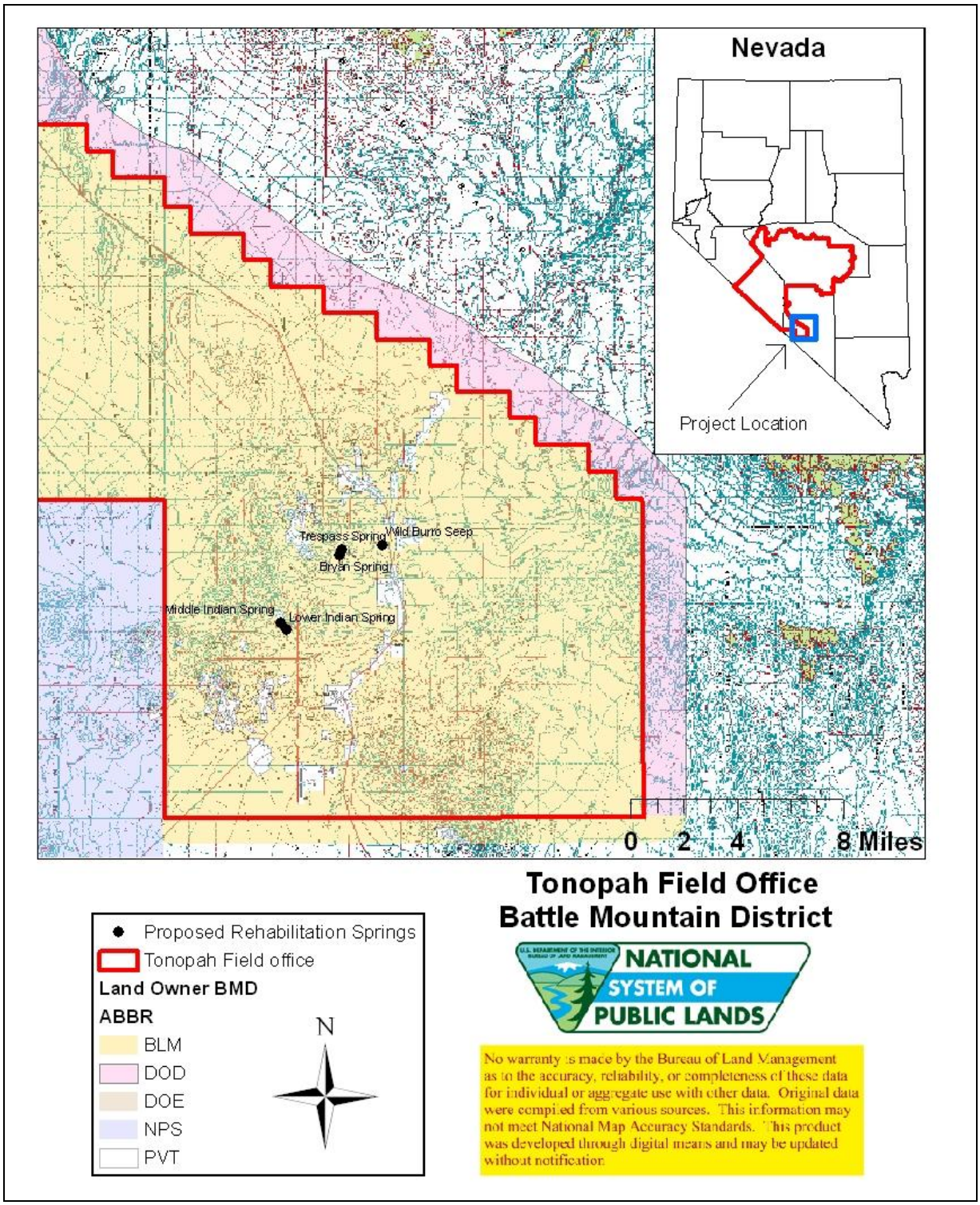

Figure 1. Project area map showing locations of the five springs that are part of the proposed action.

Image 1. Lower Indian Spring looking south at upper spring source. (11 S. 46 E., Section 26)

Image 2. Lower Indian Spring Looking Southwest toward main spring source.

Image 3. Middle Indian Spring looking south. (11 S. 46 E., Section 26)

Image 4. Middle Indian Spring looking North.

Image 5. Burro Seep looking south from Culvert. (11 S. 47 E., Section 09)

Image 6. Burro Seep looking West from Culvert.

Image 7. Trespass Spring looking North. (11 S. 47 E., Section 07)

Image 8. Trespass Spring looking South.

Image 9. Bryan Spring looking East. (11 S. 47 E., Section 18)

Image 10. Bryan Spring looking Southwest.

All of these springs have already had previous rehabilitation efforts done as listed below:

- Middle and Lower Indian Spring, 1995

  Construction on this spring consisted of a small excavation with minimal leach rock system that was installed in a joint effort between Bureau of Land Management (BLM), Nevada Department of Wildlife (NDOW), U. S. Fish and Wildlife Service (USFWS), and private contributions in 1995-1996. Since the earlier effort at Upper and Lower Indian Spring sites, native vegetation and natural soil buildup have almost completely plugged the spring. There is currently not enough open water to create a reliable breeding area for toads.

- Crystal/Bryan Spring, 1995

  Prior to 1995, local farmers, cattlemen, or sportsmen had historically cleaned this spring by using a backhoe, bulldozer, or shovel.
  A pond always existed below the spring except during the hot summer. This small pond provided limited habitat for the Amargosa toad.
  On March 9, 1995 fencing was authorized (#N65-EA95-024). Private water rights holders and the BLM came together for this project. Fence maintenance was done, but no water management was performed at that time.

- Burro Spring, 1997

  On Oct 9, 1997, the BLM authorized (Administrative Determination #N65-AD98-001) fencing twelve acres, excavations to develop Burro Spring, and installation of a water trough outside the exclosure.

  At the present time "Wild Burro Seep" is not a productive breeding or habitation site for the Amargosa toad. The existing system has not been maintained for several years and is now non-functional. Very little surface water is available, and water is no longer available at the existing trough.

- Trespass Spring, Early 1900's

  Prior work dated back to the beginning of the early railroad, mining, and cattleman days of the 20th century, estimated around 1910. Currently, the spring is producing a small amount of surface water, but needs some rehabilitation to become a productive habitat for the Amargosa toad.

Currently, these spring sources are not considered to be in Proper Functioning Condition (PFC); they can be classified as non-functional to functioning-at-risk. Attributes of a proper functioning riparian system are:

- Adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality.
- Filtered sediment that captures bedload, and aids floodplain development.

- Improved flood-water retention and ground-water recharge.
- Developed root masses that stabilize streambanks against cutting action.
- Diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses.

These proper functioning systems provide greater biodiversity by interaction among geology, soil, water, and vegetation.

Nonfunctional refers to a riparian-wetland area that clearly lacks the elements found in a proper functioning system. A riparian-wetland area may still be saturated at or near the surface or inundated in "relatively frequent" events, but be clearly nonfunctional because it lacks vegetation to protect the area from erosion and deposition.

Functioning-at risk refers to a riparian-wetland area that possesses some or even most of the elements in a proper functioning system, but has at least one attribute/process that gives it a high probability of degradation from wind action, wave action, and/or overland flow events (Riparian Area Management 2003).

More effort needs to be put into the rehabilitation of these springs to ensure that they will be in proper functioning condition 30 years from now, and will contain a healthy population of successfully breeding toads.

This proposal, if implemented, would successfully resolve current issues contained within these spring sources. The waters of these springs would be made available through the proven "Rock Cell" method which has been accepted and implemented on private lands in Oasis Valley. Invasionary species such as bullfrogs (*Rana catesbeiana)* and crayfish (*Procambarus sp.*) will be kept at bay as described in section 2.1. New fresh habitat for the Amargosa toad would be established thereby helping the Amargosa toad from becoming listed as threatened or endangered.

As is required under the Wild Horse and Burro Act, water would again be available on the west side of U.S. Highway 95, for resident burros. This should decrease the number of burro-vehicle accidents on U.S. Highway 95, as burros will not have to cross the highway to get water.

1.4.1 Amargosa Toad Natural History and Predation

The Amargosa toad is a member of the family Bufonidae which includes North American true toads. Adult males typically are 42-68 mm snout-vent length, females typically 46-89 snout-vent length (NDOW 2000) found only in Oasis Valley in Nye County, Nevada. The historic range of the species appears to be limited to a 10-mile reach of the Amargosa River and its associated riparian corridor and nearby springs and wetland systems in the region.

Much of the habitat used by the toad occurs on private lands in Oasis Valley, and is maintained through cooperative efforts with landowners, the Nevada Department of Wildlife, Natural Resources Conservation Service, Nevada Natural Heritage Program,

Beatty Habitat Committee, Amargosa Toad Working Group, U. S. Fish and Wildlife Service, Bureau of Land Management, The Nature Conservancy and other partners.

Outside the breeding season, Amargosa toads do not need much water. Interestingly, toads don't "drink" water; instead, they absorb it through the "seat patch" located on their lower belly.

Amargosa toads use a variety of habitats in Oasis Valley. Most important are wet areas near springs, along the Amargosa River, and yard and garden areas. These moist areas provide valuable feeding habitat and are critical for re-hydration in this desert environment. This habitat is common in Oasis Valley early in the spring after winter rains have created small pools and puddles. The breeding season for the Amargosa toad begins in mid-February, and may extend into July in some places. Rarely larvae have been found in October and November (NDOW 2000). Cold night-time temperatures may delay breeding except in thermal spring areas. Jones (2004) found 82% of clutches were oviposited from February 27 to March 23 in the 2001 season. She located 166 oviposition sites that year.

Breeding habitat is shallow water, with eggs found in water 1.5 to 22.5 cm deep (mean 6.5 cm) (Jones 2004). Most sites have no flow, although flow up to 0.14 m/second were recorded (ibid.). Pond edges, pools of streams, flooded marshes and meadows, ephemeral pools, springs, and artificial impoundments are used. Thermal springs are also used, as well as alkaline waters. Females deposit eggs in shallow calm waters to maximize thermal effects of solar warming or warm-spring water temperatures, allowing eggs to mature faster to hatching than ambient waters would normally allow. Substrates are fine-grained silt or sand, with gravel, cobble or rock much less used by the toads (Jones 2004).

Winter hibernacula may be in rodent burrows Pocket gopher (*Thomomys bottae*) and White-tailed antelope ground squirrel (*Ammospermophilus leucurus*), debris piles, or under rocks. More than one toad may share a hibernaculum. Boreal toad hibernacula have been found 1 to 2.5 mile from the nearest water (Bartelt and Peterson 1997, Keinath and McGee 2005). More research is needed on Amargosa toads and their breeding habits.

All of the spring sources proposed for this rehabilitation effort have historical documented use by the Amargosa toad. Currently there are no toads using any of the five spring sources proposed for this rehabilitation effort. This absence is due to encroachment of vegetation choking out spring sources, and the introduction of the bullfrog and crayfish into the Oasis Valley. Both of these invasive species prey upon the Amargosa toads and their eggs. The proposed project described below is designed to eliminate both plant and animal invasions within the spring source.

CHAPTER 2
PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION AND ACTION ALTERNATIVES

The proposed action is to rehabilitate these 5 springs by using a simple and effective "rock cell design." By installing "Rock Cell" (Figure 2) reconstruction in the spring area and "Constantly Running Hose" discharge pipes to carry the water out, open water would remain available for the use of multiple resources. Multiple breeding sites would be maintained by simply opening or closing a valve. This ability is of paramount interest as the need to "Move the water around" is absolutely necessary to stay ahead of invasive species of bullfrogs, crayfish, and tamarisks that are in Oasis Valley. Similar projects in the Oasis Valley constructed on private land have shown that native sedges, reeds, willows, and grasses have to be kept at bay or they will close out the new sites.

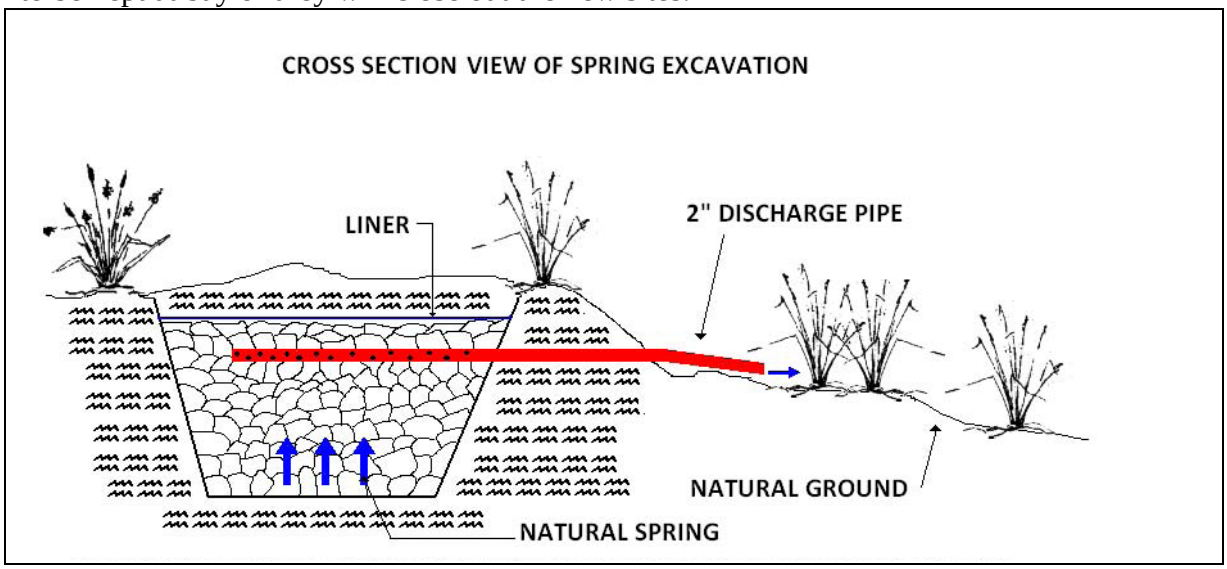

Figure 2. Conceptual design of spring rehabilitation construction.

2.1.1 Construction and Staging Area

The Proposed Action would be contained within spring areas. Three of the five are already fenced, and accessed by way of existing roads and tracks. Rock material will be cleaned and washed before placement. After rock material is placed, a liner will be installed to prevent roots and soil from penetrating the rock cell and potentially plugging the perforated pipe. Staging of equipment would be within project areas or within fenced ex-closures.

2.2 SCOPING

A tour of the project location took place on April 15, 2010 following an Amargosa toad Working Group meeting in Beatty, NV. Those who attended represented the BLM, NDOW, USFWS, Natural Resources Conservation Service (NRCS), and the Amargosa Toad Working Group. The tour consisted of site visits of all 5 proposed rehabilitation locations. Issues brought up during the site visits were included in the proposed action section above.

2.3 ALTERNATIVES TO THE PROPOSED ACTION

The National Environmental Policy Act (NEPA) directs the BLM to "study, develop, and describe appropriate alternatives to recommend courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources" (42 United States Code 4332). Alternatives to the proposal should meet the purpose and need of the

Proposed Action. Alternatives should be practical or feasible from a technical and economic standpoint, and reasonably accomplished.

2.3.1 No Action Alternative

Under the No Action Alternative, the BLM would not authorize the spring improvement project. No rehabilitation activities would take place. The existing system in place would remain, and the springs would continue to degrade and become non-functional. Invasive species would continue to invade the springs, and toad populations in the area would not be increased.

CHAPTER 3.0
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This section describes elements of the existing environment that could be affected by the proposed action or the no-action alternative. The BLM is required to address specific elements of the environment that are subject to requirements specified in statute or regulation or by executive order (BLM 2008). Table 3-1 outlines the elements that must be addressed in all environmental analyses, as well as other resources deemed appropriate for evaluation by the BLM, and denotes if the Proposed Action or No-Action Alternative affects those elements.

Table 3-1 Supplemental Authorities of the Human Environment and Rationale for Detailed Analysis

	Not Present	Present/ Not Affected	Present/ May be Affected	Rationale
Supplemental Authority				
Air Quality		X		Project activities would create fugitive dust from travel and any surface disturbance; however these impacts would be temporary and short-term and would not exceed air quality standards within the project area.

Table 3-1 Supplemental Authorities of the Human Environment and Rationale for Detailed Analysis

	Not Present	Present/ Not Affected	Present/ May be Affected	Rationale
Area of Critical Environmental Concern (ACEC)	X			There are no areas of Critical Environmental Concern (ACECs) present in the vicinity of the proposed action. An ACEC nomination for the Amargosa-Oasis Valley area will be evaluated during the current revision of the RMP.
Cultural/ Historical		X		A Class III inventory of the project area has been completed. No cultural resources were found within the footprint of the Proposed Action.
Paleontology	X			There are no outcrops of fossil-bearing strata in the immediate area of these springs.
Environmental Justice (EJ)	X			The project would not impact any of the designated populations as described in the EJ Executive Order.
Farmlands Prime/or Unique	X			Resource not present in the vicinity of the Proposed Action.
Noxious Weeds/Invasive Non-native Species			X	Noxious or non-native invasive weeds may invade the project area shortly after construction. See section 3.3.5 for additional description.
Native American Religious Concerns		X		Native American tribes were consulted by the BLM. Members of the Timbisha tribe were notified of the project in March 2010 a field visit will be conducted prior to the signing of the FONSI and ROD.
Floodplains	X			Resource not present in the vicinity of the Proposed Action area.
Riparian/ Wetlands			X	Proposed project would take place in riparian areas. Displacement of soils and riparian vegetation is anticipated. See section 3.3.6

Table 3-1 Supplemental Authorities of the Human Environment and Rationale for Detailed Analysis

	Not Present	Present/ Not Affected	Present/ May be Affected	Rationale
Threatened, Endangered Species-Special Status			X	See Section 3.3.1 for description.
Migratory Birds			X	See Section 3.3.2 for description.
Waste Hazardous/ Solid		X		No hazardous waste would be generated by the proposed action. Any solid waste or debris associated with construction activities would be removed and properly disposed of at an approved off-site location.
Water Resources/Quality			X	The Amargosa Desert Watershed Area, like most others in this arid desert region, lacks perennial sources of surface water and the small amount of water that is present does not meet the United States Environmental Protection Agency's minimum standards for drinking water according to the latest BLM studies (BLM 1997).
Wild and Scenic Rivers	X			There are no wild and scenic rivers in the vicinity of the proposed action area.
Fish Habitat	X			Spring sources proposed for rehabilitation do not provide sufficient habitat to support fish populations.
Wilderness	X			There are no designated BLM wilderness areas in the vicinity of the Proposed Action.
Forests and Rangelands (Healthy Forest Restoration Act land only)	X			This project does not qualify as an HFRA project.

Table 3-1 Supplemental Authorities of the Human Environment and Rationale for Detailed Analysis

	Not Present	Present/ Not Affected	Present/ May be Affected	Rationale
Human Health and Safety			X	The Proposed Action will have a positive impact on human safety by reducing vehicle accidents w/ wildlife (burros) along U.S. Highway 95. See section 3.3.9
Other Resources				
Grazing Management	X			The Proposed Action is within the Razorback Grazing Allotment, however, there is currently no active livestock grazing in the project area.
Lands & Realty			X	The proposed project would take place on BLM-administered lands and would utilize existing roads for access. See Section 3.3.11.
Minerals		X		The Proposed Action would involve excavation of already developed spring sources; therefore, there would be no expected impacts to local mineral resources.
Recreation	X			There are no special or significant recreation areas at or near the project site. Rehabilitation of springs could lead to wildlife viewing opportunities.
Socio-Economic Values	X			The proposed action takes place in an rural area and would not have a significant effect on local socio-economic values.
Soils			X	The Proposed Action would involve excavation of soils in the project areas. See section 3.3.8.
Vegetation			X	There will be minimal disturbance to existing vegetation during project construction; however, riparian vegetation should become more vigorous following project construction. See section 3.3.3.

Table 3-1 Supplemental Authorities of the Human Environment and Rationale for Detailed Analysis

	Not Present	Present/ Not Affected	Present/ May be Affected	Rationale
Visual Resources	X			Construction materials would be natural materials, and would blend into the surrounding landscape, therefore maintaining consistency with Visual Resource Management (VRM) Class III and IV objectives, and would only be visible from the two-track leading to the project areas.
Wild Horses & Burros			X	The proposed action area is within the Bullfrog Herd Management Area. The proposed project would provide critical water sources for wild horses and burros and would reduce safety concerns. See section 3.3.10.
Wildlife			X	See Section 3.3.1, 3.3.2, and 3.3.4.

Source: BLM 2008.

3.2 RESOURCES NOT EVALUATED FURTHER

The BLM interdisciplinary team reviewed the resources in Table 3-1 and determined that those supplemental authorities as listed are not present in or near the Proposed Action Area, or present but would not be affected. These elements will not be analyzed further in this EA.

3.3 RESOURCES CARRIED FORWARD FOR FURTHER ANALYSIS

The following resources presented in Table 3-1 have been determined to be present and potentially affected by the Proposed Action: Noxious Weeds/Invasive Non-Native Species; Riparian/Wetlands; Threatened and Endangered Species; Migratory Birds; Lands and Realty; Water Resources/Quality, Human Health & Safety; Soils; Vegetation; Wild Horses and Burros and Wildlife. BLM specialists have evaluated the potential impacts of the Proposed Action and No-Action Alternative on these resources.

This EA includes a description of the affected physical, biological, and human environment in the proposed action area. This information was derived from data gathered during literature searches and field surveys for sensitive plant and animal species and cultural resources at the proposed action area and consultation with the other federal, state and local agencies.

3.3.1 Threatened and Endangered Species-Special Status Species

Affected Environment

There are several BLM sensitive wildlife species that may occur in the survey area. The threatened Desert tortoise (*Gopherus agassizii)* is the only species categorized as threatened or endangered that has potential to occur in the project area. At the initiation of this proposed action, the Amargosa toad was being considered for listing as a threatened and endangered species. At the completion of a 12-month investigation ending July 2010, it was determined that this species did not warrant listing throughout its range.

Table 3-2 contains a list of Threatened and Endangered and Special Status species found in the project area.

Table 3-2 Special Status Species that may occur in the project area	
Mammals	**Common Name**
Antozous pallidus	Palid bat
Eptesicus fuscus	Big brown bat
Corynorhinus townsendii	Townsend's big-eared bat
Myotis californicus	California myotis
Myotis ciliolabrum	Small-footed myotis
Myotis evotis	Long-eared myotis
Myotis lucifungus	Little brown myotis
Myotis volans	Long-legged myotis
Ovis canadensi nelson	Desert bighorn sheep
Birds	**Common Name**
Aquila chrysaetos	Golden eagle
Athene cunucularia	Burrowing owl
Buteo regalis	Ferruginous hawk
Falco mexicanus	Prairie falcon
Lanius ludovicianus	Loggerhead shrike
Pooecetes gramineus	Vesper sparrow
Sphyrapicus nuchalis	Red-naped sapsucker
Vermivora luciae	Lucy's Warbler
Reptiles	**Common Name**
Gopherus agassizii	Mojave Desert Tortoise
Sauromalus obesus	Gila Monster
Amphibians	**Common Name**
Anaxyrus nelson	Amargosa toad
Plants	**Common Name**
Unclahes Rethuiac	Ruth's Milkweed
Astragalus uncialis	Currant Milkvetch
Penstemon palmeri	Palmer's penstemon

Additionally, the BLM and USFWS, during informal consultation, agreed on a not affected determination on the Desert tortoise as long as the following stipulations are followed:

- All trash and food items generated by the proposed action shall be promptly contained in covered, raven-proof containers and regularly removed from the site to a designated solid waste disposal site;

- A speed limit of 25 miles per hour shall be required for all vehicles involved with the Proposed Action and on unposted dirt access roads;

- The Proposed Action area will be clearly marked or flagged at the outer boundaries of the disturbance area before the onset of ground disturbance. All activities shall be confined to the Proposed Action area; and

- If a tortoise enters the work area during ground disturbing activities, all activities must cease, and the BLM Tonopah Field Office and USFWS must be notified.

Environmental Consequences
If the Proposed Action is approved, riparian vegetation and available water will increase. Because water is one of the limiting factors for wildlife in the project area, special status species abundance in the project area would be expected to increase. The Proposed Action would allow for recovery and establishment of a healthy native riparian community associated with the saturated soils surrounding and downstream from the spring source, thus providing an increase in a relatively rare and disproportionately valuable vegetation community. This is likely to benefit State-listed Sensitive and BLM Special Status Species that may use the spring vicinity.

There may be some temporary displacement of these species during the construction phase. The disturbed area is expected to recover quickly, as native soils will be returned to the construction areas and plants will be re-planted as the last step of the construction phase.

No Action Alternative

With no rehabilitation effort in the proposed areas State-listed Sensitive and BLM Special Status Species would not benefit from a healthy, functioning, riparian community.

3.3.2 Migratory Birds

Affected Environment
"Migratory bird" means any bird listed by the USFWS in 50 CFR 10.13. All native birds found commonly in the United States, with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act (MBTA) (16 USC 703711). The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings. Executive Order 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

Additional direction comes from a January 17, 2001, Memorandum of Understanding (MOU) between the BLM and the USFWS. This MOU strengthens migratory bird conservation through enhanced collaboration between the two agencies, in coordination with state, tribal, and local governments. The MOU identifies management practices that could impact populations of high priority migratory bird species including migratory bird nesting, migration, and over-wintering habitats, and develops objectives and recommendations that would avoid or minimize these impacts. A variety of migratory birds use the habitat types within the project area for breeding and foraging.

Potential migratory bird species that may be found within the project area may include but are not limited to the Ash-throated Flycatcher, Bewick's Wren, Black-headed Grosbeak, Black-throated Gray warbler, Black-throated Sparrow, Blue-gray Gnatcatcher, Brewer's Sparrow, Brown-headed Cowbird, Bushtit, Cassin's Finch, Chipping Sparrow, Common Raven, Costa's hummingbird, Gray Flycatcher, Horned Lark, House finch, House Sparrow, House Wren, Le Conte's Thrasher, Lesser Goldfinch, Loggerhead Shrike, Mourning Dove, Northern Mockingbird, Rock Wren, Sage Sparrow, Say's Phoebe, Spotted Towhee, Swainson's thrush, Vesper Sparrow, Western Scrubjay, and the White-crowned sparrow (Great Basin Bird Observatory, 2007).

Environmental Consequences

Impacts to migratory birds or their habitats are expected to be inconsequential because the desert scrub habitat typically used by migratory birds occurs for thousands of acres around the project area and birds would likely temporarily move into unoccupied habitat during construction. Displacement from the area would constitute a temporary minor adverse impact, but birds would likely reestablish themselves once construction activities are over. There is a low potential for birds to be directly struck or injured by construction activities as they move away from disturbances. If construction occurs during breeding activities, nests may be abandoned causing a moderate adverse impact. However, the potential for breeding activities to occur in the area is low and mitigation measures would reduce adverse impacts to negligible levels. A breeding bird survey will be required if ground disturbing activities are planned during nesting season, which extends from approximately March 1 through July 31.

<u>No Action Alternative</u>

Improvement of vegetation cover, production, and composition important to migratory bird populations within the riparian area would not take place.

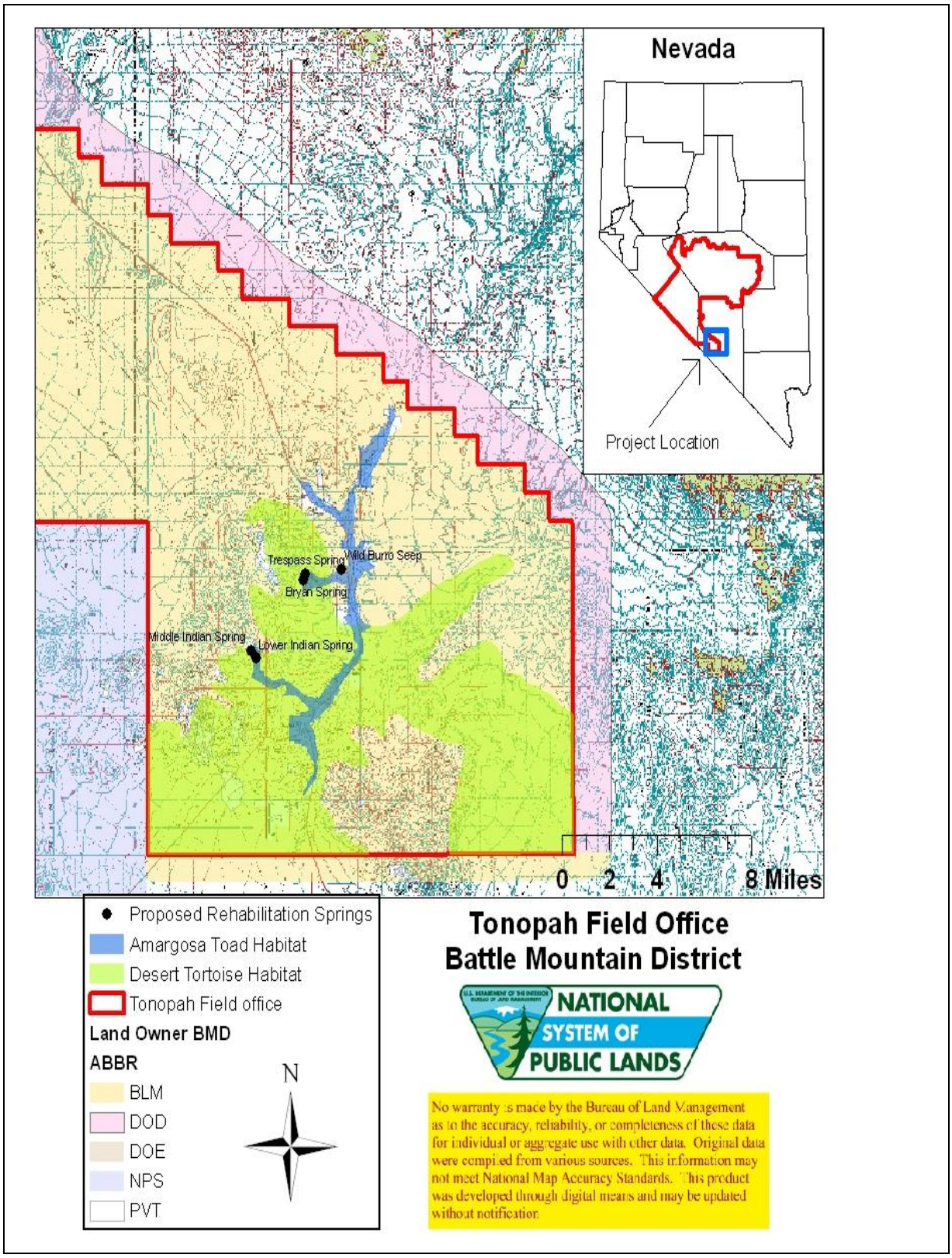

Figure 3. Map of Amargosa Toad and Desert Tortoise Habitat Areas.

3.3.3 Vegetation

Affected Environment

The Proposed Action area is located in riparian areas surrounded by sparsely vegetated desert valley within the Amargosa Valley. Dominant vegetation in the Proposed Action area, both riparian and upland, are included in Table 3-3 below. For sensitive plant species, see table 3-2 on page 19.

Table 3-3 Plant Species List For The Proposed Action Area

Scientific Name	Common Name
Larrea tridentate	Creosote bush
Atriplex canescens	Fourwing saltbush
Acamptopappus shockleyi	Shockley's goldenhead
Ambrosia dumosa	White bursage
Lycium pallidum	Pallid box thorn
Grayia spinosa	Spiny hopsage
Ephedra funereal	Death Valley ephedra
Gutierrezia sarothrae	Broom snakeweed
Eriogonum fasciculatum	California buckwheat
Ericameria nauseosa	Rubber Rabbitbrush
Eriogonum inflatum	Desert trumpet
Hymenoclea salsola	Cheesebush
Chaenactis stevioides	Esteve pincushion
Xylorhiza tortifolia	Mojave-Aster
Astragalus mollissimus	Woolly loco
Amsinckia tessellate	Fiddleneck
Erodium botrys	Broadleaf filaree
Stipa speciosa [*Achnatherum speciosum*]	Desert needlegrass
Bromus madritensis ssp. *Rubens*	Foxtail chess
Schismus arabicus	Mediterranean grass
Salix lutea	Yellow willow
Carex nebrascensis	Nebraska sedge
Distichilis stricta	Inland saltgrass
Juncus balticus	Baltic rush
Rorippa nasturtium-aquaticum	Watercress
Typha Spp.	Cattail

Source: USDA Plants Database.

Environmental Consequences
Disturbance to existing vegetation is expected during project construction; however, riparian vegetation should become more vigorous following project construction. Riparian vegetation is present and it is expected that areas denuded of vegetation would re-seed naturally as existing vegetation completes its phenological cycle.

Native soils will be stockpiled and reused after reconstruction. Any sensitive plant species found in the project area would be avoided, however none were found during surveys of the area.

No Action Alternative

No vegetation will be disturbed and existing riparian vegetation will continue to degrade.

3.3.4 Wildlife

Affected Environment
Numerous other common wildlife species such as the gopher snake, desert spiny lizard, desert iguana, coyote, black-tailed jackrabbit, and desert kangaroo rat inhabit the area.

Environmental Consequences
Provided that all documented wildlife species are avoided through monitoring their presence during construction and maintenance activities, no impacts to wildlife should occur. Long term impacts to wildlife should be positive as additional acreage of high-value riparian habitat should occur as more surface water becomes available.

No Action Alternative

With no rehabilitation effort wildlife would not benefit from a healthy, functioning, riparian community.

3.3.5 Noxious Weeds/Invasive Non-native Species

Affected Environment
As in many parts of Nevada that have been disturbed, noxious weeds are common. While not officially inventoried, the following weeds have potential to occur in the project area: tall whitetop (*Lepidium latifolium L.),* perennial pepperweed (*Lepidium latifolium),* hoary cress (*Cardaria draba*), and scotch thistle (*Onopordu macanthium*). These weeds are interspersed with native vegetation and occasionally dominate areas where past disturbance has occurred.

Environmental Consequences
The area is currently considered to be relatively weed-free. The ground disturbance created by the excavation of the spring sources could lead to the introduction of new weed infestations in the project area. If new weed infestations are established within the project area this could have an adverse impact on native plant communities.

Implementation of BLM Battle Mountain District Weed Management Standard Operating Procedures will decrease the likelihood of weed introduction. Once a healthy native riparian vegetation community is reestablished within the protection fence, the area will be more resistant to invasion by noxious or invasive weeds.

No Action Alternative

Under the No Action Alternative the riparian areas would continue to degrade. The native vegetation would continue to decline in health, allowing for a greater occurrence of noxious and invasive weeds.

3.3.6 Riparian and Wetlands

Affected Environment
The ability of these riparian communities to slow an overland flow event, provide quality riparian habitat for wildlife, and provide other riparian functions is currently severely degraded, and clearly lacks the elements found in a proper functioning system. Current indications show that non-functioning historic rehabilitation efforts are providing very little surface water flow. This project is designed to improve water flow and thus riparian condition and function.

Environmental Consequences
Riparian vegetation and soils may be displaced during the construction phase of the project. If displacement occurs, the vegetation would be placed back into its original position, and regeneration should occur. Increased water flow that should result from rehabilitating these springs may result in 30 percent additional riparian within the project area.

No Action Alternative

The riparian area would continue to degrade.

3.3.7 Water Resources and Quality

Affected Environment
Water quality has not been quantitatively measured at proposed spring sources. Observations indicate that non-functioning spring systems have significantly degraded water quality, primarily through over grown vegetation, suspended solids, temperature fluctuations, and mean water temperature. Water quality indicators such as total suspended solids are expected to improve due to the Proposed Action through restoration of a functioning riparian vegetative community.

Water rights are held by both the BLM and private owners. Private water right holders have been notified Thus far, the BLM has not received any objections to this project based on water rights.

Environmental Consequences
Water quality may be temporarily impacted during the excavation phase, as muddying may occur as soils are moved around. Although, in the long term water quality is expected to improve, through restoration of riparian vegetation cover within the project areas. Restoration of a healthy, vigorous, riparian community will have the effect of stabilization and seasonal fluctuations in water temperature.

No action alternative

Spring flow would not improve, leading to further degradation of the riparian habitat.

3.3.8 Soils

Affected Environment
Soil survey data for the project area is described in the soil survey for the southwest part of Nye County, Nevada (National Resource Conservation Service, 2006). Soils near the project area are described as very gravelly, sandy, loam. Slopes and hilltops have extensive bedrock exposures.

Drainages contain coarse-grained alluvium consisting of a poorly sorted, gravelly, skeletal, dark grayish brown silt loam with angular to sub-angular gravel, cobbles, and boulders. The quality of these existing soils for reclamation purposes is considered high, due primarily to the darker soil found in the riparian areas, available water capacity, and depth of some soils.

Environmental Consequences
Direct impacts to soils would result from the construction of the Proposed Action. Most of the disturbance would take place within the footprint of the existing spring developments. Total disturbance to soil resources from the Proposed Action would be approximately 12 acres. The displacement of soil would occur during different construction phases. As soils are collected, stored, and redistributed, the soil horizons would become mixed. This may result in changes in soil texture and permeability. In addition, changes in soil depth (difference from the original undisturbed soil depth) would occur. Most of the soil would be replaced by leach rock for the rock cell design noted in the project design. While the top soil horizon would be placed back in place after construction is complete to promote native re-vegetation.

No action alternative

Soils within the riparian area and surrounding uplands would continue to degrade and become increasingly vulnerable or lost to erosion.

3.3.9 Human Health and Safety

Affected Environment
Spring rehabilitation will increase availability for wild horses and burros. Burros that now cross the busy stretch of U. S. 95 just north of Beatty will be able to access water on the west of the highway.

Environmental Consequences
Auto-burro accidents should be reduced by as much as 50 percent.

No action alternative

Auto-burro accidents would continue at current rates, and could possibly increase.

3.3.10 Wild Horses and Burros

Affected Environment
The project is located in the Bullfrog HMA (Figure 4) with a current AML of 195 burros and 12 horses. The springs proposed for rehabilitation are used very often by resident burros when surface water is available. Currently there is very little surface water available for burros on the west side of highway 95, thus forcing the burros to cross the highway to access water, and endanger motorists.

Environmental Consequences
Burros are killed each year due to vehicle accidents. If the proposed action is authorized more water will be made available, benefiting the wild horses and burros on the west side of the highway, and motorists traveling on Highway 95. This available water could also improve the health of the burros and wild horses in the Bullfrog HMA, as they would not have to travel as far from feed to water.

During the construction phase, burros may be temporarily displaced. Pits or hazards to burros will be fenced or covered when construction is inactive. Crystal spring currently is pitted out at the source and currently poses a hazard for burros who try to reach water. One burro was found dead in the pitted area in 2009. The new design of the spring will eliminate hazards to resident horses and burros.

No action alternative

Wild horses and burros would continue to cross the highway potentially increasing vehicle-burro collisions. Also with little to no water access at the springs, burros and horses will have to travel much farther for water and thus degrade their health. Some areas also have pitting that could injure animals or increase predator opportunities.

3.3.11 Lands and Realty

Affected Environment
The BLM ROW program is designed to coordinate the actions of individuals, government and business to promote the sharing of ROWs, to prevent unnecessary environmental damage to lands and resources, and to protect the holders' investments in improvements on the right-of-way. BLM ensures that undue or unnecessary degradation of public or private land does not occur as well as any negative impacts to other aspects of the environment.

Access for construction, maintenance, and monitoring work is gained using the existing roads. Two ROW's held by the City of Rhyolite were issued for the pipeline in Lower Indian Springs because of the water rights association. However, since issuance, a 5th Judicial District Court of the State of Nevada ruling for the Nevada State Water Engineer found Permit 1305, Certificate 592 and Permit 593 to be abandoned and all rights there under, deemed forfeited as provided under NRS 533.060.

Environmental Consequences
The proposed action would only require minimal disturbance of the associated BLM right-of-ways.

The table below lists existing ROWs that are within the Proposed Action area. The cell tower access road would be used as an ingress and egress road to the proposed project.

Table 3-4: Rights-of-Way Authorizations

N-06873	Rhyolite – pipeline – Lower Indian Springs	25' from centerline	City of Rhyolite, Inc. James Spencer
Nev 054920	Rhyolite – pipeline – Lower Indian Springs	5' from centerline	City of Rhyolite, Inc. James Spencer
N-30559	Water pipeline, well, pumphouse	40' from centerline	Beatty Water & Sanitation District
N-51002	Well site, pump house, tank site	10' from centerline	Beatty Water & Sanitation District
N-51039	14.5 kV Distribution Line to water well	10' from centerline	Valley Electric Association, Inc.
N-55324	Water pipeline, well #2, pumphouse	12' from centerline	Beatty Water & Sanitation District
N-56135	25 kV distribution line to Well #2	10' from centerline	Valley Electric Association, Inc.

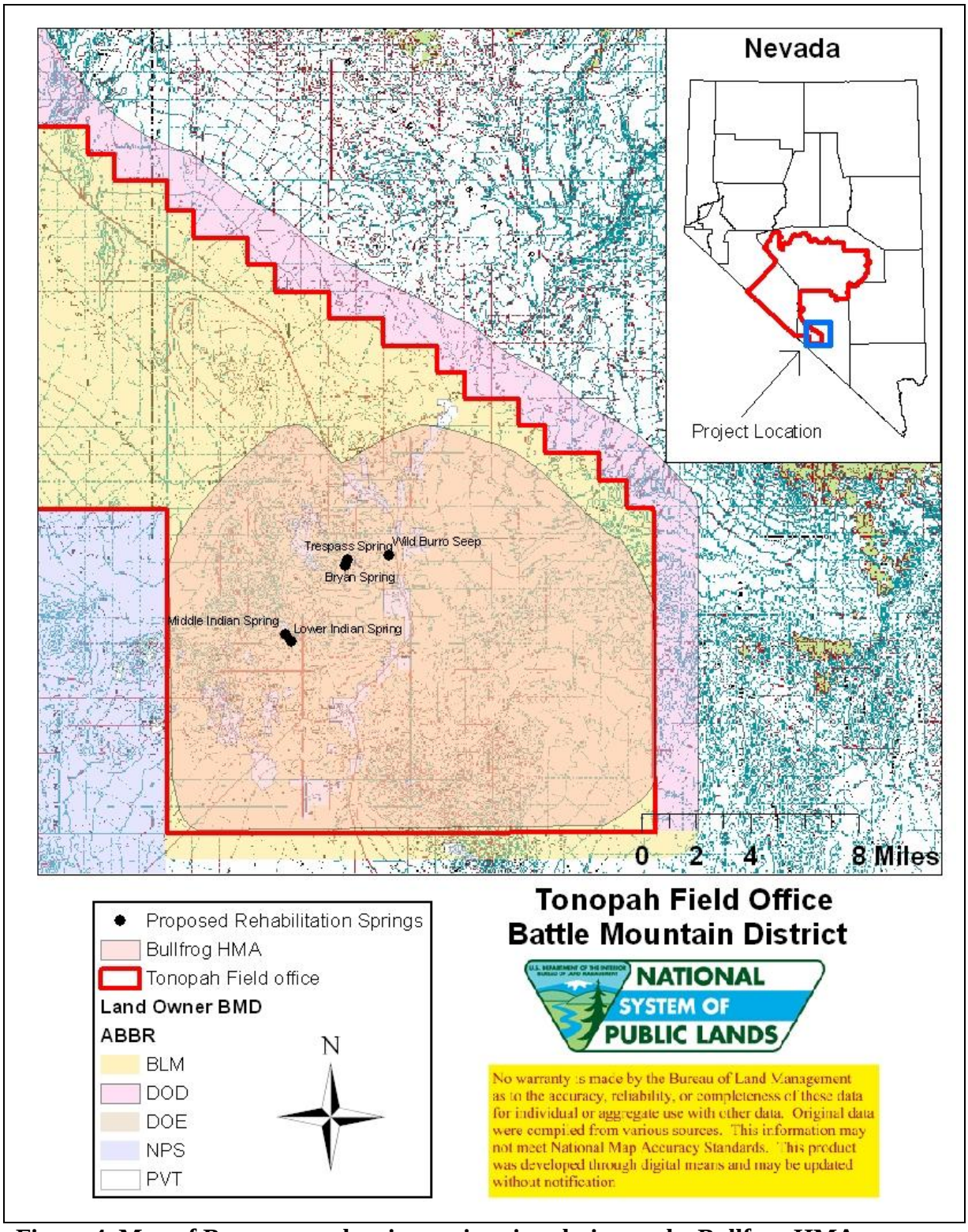

Figure 4. Map of Beatty area showing springs in relation to the Bullfrog HMA.

4.0 CUMULATIVE IMPACTS

4.1 INTRODUCTION

As required by NEPA and its implementing regulations, this chapter addresses the cumulative effects on the environmental resources in the CESA which could result from the implementation of the Proposed Action in combination with the past actions, present actions, and reasonably foreseeable future actions. The CESA for the specific resources is described in section 4.1.1. The length of time considered for cumulative effects analysis varies according to the duration of impacts from the Proposed Action on each resource. For the purposes of this analysis and under federal regulations, "impacts" and "effects" are assumed to have the same meaning and are used interchangeably.

4.1.1 Cumulative Effects Study Area

Since the construction impact of rehabilitating these springs is expected to be minimal, the CESA area has been kept to a minimum of approximately a two mile buffer around each spring source (Figure 5). The duration of the cumulative impact is assumed to be ten years for recovery time for vegetation and wildlife, and up to twenty years for an expected increase of wildlife species populations in the CESA.

4.1.2 Past And Present Actions

Past and present actions within the CESA consist primarily of historic development and rehabilitation efforts within the spring sources. Several mines are located in the CESA, however, most are inactive. Several BLM mining claims have been staked and are currently active in and around the CESA and the Bullfrog Hills, the latter of which has produced large amounts of minerals including gold, silver, and lead.

Past and present actions within the CESA are supported by a surface transportation network which includes SR-374, county roads, dirt roads, and "two-tracks" on public lands. Few are regularly maintained and off-highway vehicle (OHV) use may occur outside of this network.

Livestock grazing has occurred in the past within the Razorback grazing allotment, which includes the CESA, however, the CESA is not known to contain any grazing livestock at the present time.

4.1.3 Reasonably Foreseeable Future Actions

Reasonably foreseeable future actions include a 5-acre pumice mine development and the Bullfrog Hills 5-acre mining exploration project. Both of these are not expected to contribute to a long term impact in the spring CESA.

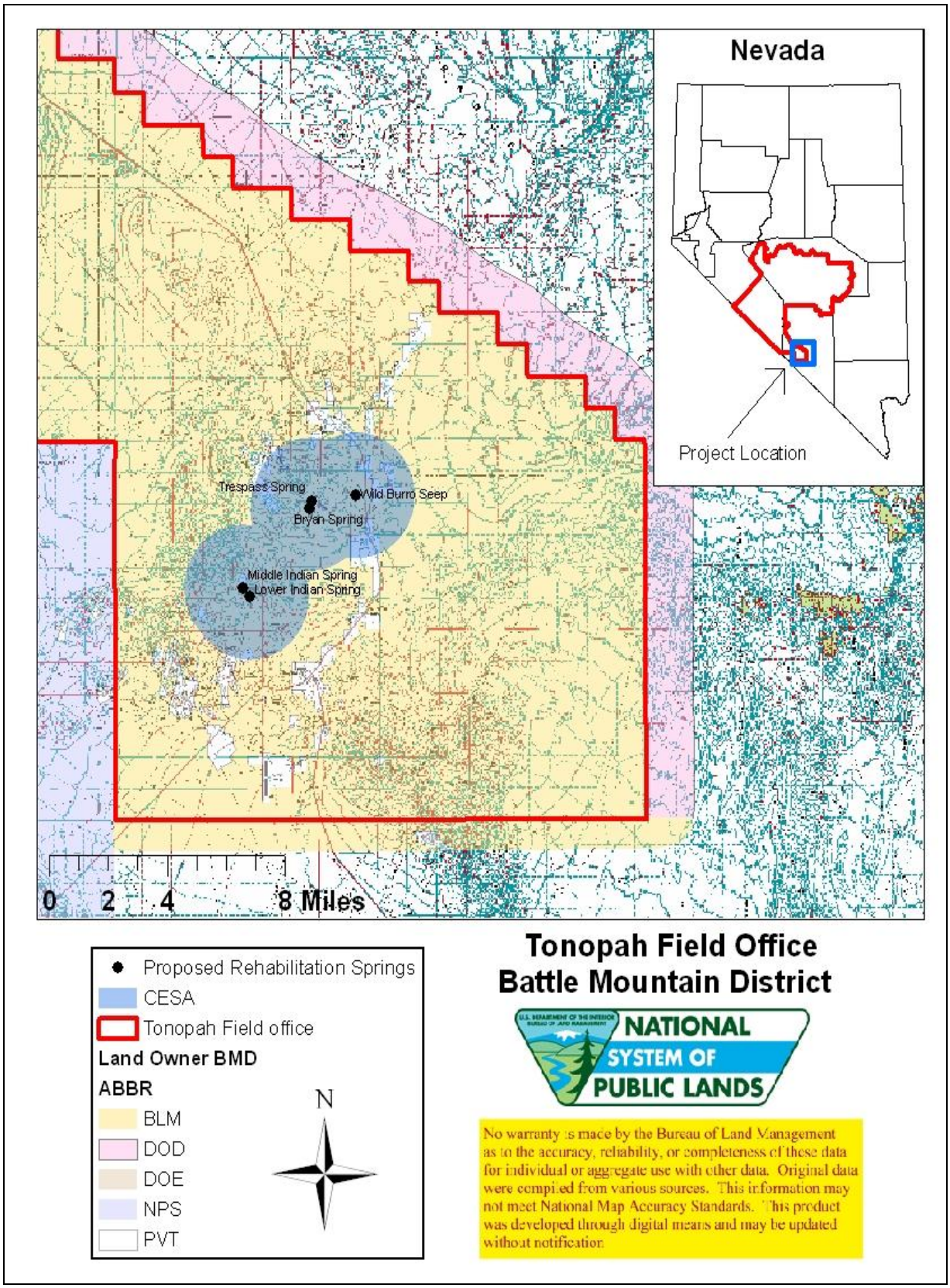

Figure 5. Map showing springs in relation to the CESA.

4.2 EVALUATION OF THE POTENTIAL PROPOSED ACTION CUMULATIVE IMPACTS

4.2.1 Cultural and Historic Resources

A Class III cultural resource survey was preformed; no cultural resources were found within the footprint of the proposed action.

4.2.2 Wildlife (Including Migratory Birds and Special Status Species)

The Proposed Action is not expected to cause short term impacts to local wildlife communities as long as requirements, such as avoiding sensitive species, are met. Impacts to wildlife may occur temporarily as vegetation will be removed during the construction phase.

A lack of negative impacts is a result of the short period and footprint during the construction phase. Current potential land uses, include OHV use, mining, and commercial and non-commercial filming. There would be very little long-term cumulative disturbance from the Proposed Action. Long term positive impacts may occur as anticipated regeneration and creation of new vegetation is developed. This would ultimately lead to creation of additional high-value riparian habitat, thus increasing local wildlife populations.

4.2.3 Vegetation, Soils

The Proposed Action is not expected to cause significant negative impacts to local vegetative communities as long as requirements, such as avoiding sensitive species, are met. With adequate precipitation, plant communities should show growth within 3-5 years. Potential long term positive impacts could result from the development additional acreage of high value vegetation.

4.3 No-Action Alternative

Under the No-Action Alternative, the BLM would not approve the Proposed Action and the potential cumulative impacts analyzed above would not occur. Present activities would continue in the CESA and current BLM management practices would be utilized for past, present, and reasonably foreseeable future action. The spring sources would continue to degrade and slowly dry up. This would lead to a loss of riparian soils and vegetation.

CHAPTER 5.0
MITIGATION AND MONITORING

5.1 MITIGATION AND MONITORING

5.1.1 Noxious Weeds, Invasive, Non-Native Species

The BLM weed management team would be responsible for weed control on disturbed areas and would use current best management practices such as prevention, control, and eradication.

5.1.2 Migratory Birds

To prevent undue harm, habitat-altering projects or portions of projects should be scheduled outside bird breeding season. The season generally occurs between March 1 and July 31.

If any aspects of the project may alter any breeding habitat during the breeding season, then a qualified biologist must survey the area for nests prior to commencement of construction activities. This shall include burrowing and ground nesting species in addition to those nesting in vegetation.

A Migratory Bird survey would be required, to determine the presence of nesting migratory birds, if earth disturbing activities occur March 1 through July 31.

If any active nests (containing eggs or young) are found, an appropriately-sized buffer area must be avoided until the young birds fledge.

5.1.3 Environmental Monitoring

Spring sites will be monitored twice each year for recruitment and existence of Amargosa toad populations. This effort is headed by NDOW. The BLM weeds staff will also monitor all sites periodically for invasive plants

CHAPTER 6.0
LIST OF PREPARERS AND SOURCES

6.0 LIST OF PREPARERS/REVIEWERS

This EA was prepared by the BLM Tonopah Field Office, Tonopah, Nevada,

Table 6-1: List of Preparers, Data Providers and Reviewers

Name	Title	Affiliation	Responsibility
Devin Englestead	Wildlife Biologist (Project Lead)	Tonopah Field Office, BLM	Wildlife – T&E Special Status Species, Riparian and Wetlands, Air Quality
Wendy Seley	Realty Specialist	Battle Mountain District, BLM RECO	Visual Resources
Larry Grey	Hydrologist	Battle Mountain District, BLM RECO	Water Resources and Quality
Alan Buehler	Supervisory Geologist	Tonopah Field Office, BLM	Minerals, , ACEC's, Recreation/Wilderness, Environmental Justice, Lands and Realty
John Hartley	Planning and Environmental Coordinator	Tonopah Field Office, BLM	NEPA Adequacy
Susan Rigby	Archaeologist	Tonopah Field Office, BLM	Cultural Resources, Native American Religious Concerns
Marc Pointel	Supervisory Natural Resource Specialist	Tonopah Field Office, BLM	Rangeland Health
Sheryl Post	Rangeland Management Specialist	Tonopah Field Office, BLM	Noxious Weeds
Dustin Hollowell	Wild Horse and Burro Specialist	Tonopah Field Office, BLM	Wild Horse and Burro
Adam Stephens	Rangeland Management Specialist	Tonopah Field Office, BLM	Rangeland Health, Soils, Vegetation

CHAPTER 7.0
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